VOLUME XIX

January—June 1959

CIRCULATION
Official Journal of the American Heart Association

No. 1

EDITORIAL
A General Survey of Cardiac Electrophysiology. Hans H. Hecht...

Fibrinolytic (Plasmin) Therapy of Experimental Coronary Thrombi with Alteration of the Evolution of Myocardial Infarction. Paul Ruegsegger, Irwin Nydick, Robert C. Hutter, Alvin H. Freiman, Nils U. Bang, Eugene E. Clifton and John S. LaDue

Anomalous Atrioventricular Excitation (Wolff-Parkinson-White Syndrome). Hans H. Hecht...

Fibrinolytic (Plasmin) Therapy of Experimental Coronary Thrombi with Alteration of the Evolution of Myocardial Infarction. Paul Ruegsegger, Irwin Nydick, Robert C. Hutter, Alvin H. Freiman, Nils U. Bang, Eugene E. Clifton and John S. LaDue

Hereditary Occurrence of the Pre-Excitation (Wolff-Parkinson-White) Syndrome with Re-Entry Mechanism and Concealed Conduction. William W. Harnischfeger

Anomalous Atrioventricular Excitation (Wolff-Parkinson-White Syndrome). Louis Wolff

Hereditary Occurrence of the Pre-Excitation (Wolff-Parkinson-White) Syndrome with Re-Entry Mechanism and Concealed Conduction. William W. Harnischfeger

Ballistocardiogram in Chronic Severe Anemia. L. M. Sanghvi and K. Banerjee

Anomalous Atrioventricular Excitation (Wolff-Parkinson-White Syndrome). Louis Wolff

Suprasternal Transeortic Coronary Arteriography. William M. Lemmon, J. Stauffer Lehman and Randal A. Boyer

Hereditary Occurrence of the Pre-Excitation (Wolff-Parkinson-White) Syndrome with Re-Entry Mechanism and Concealed Conduction. William W. Harnischfeger

Ballistocardiogram in Chronic Severe Anemia. L. M. Sanghvi and K. Banerjee

The Discovery and Early Development of Anticoagulants: A Historical Symposium. Irving S. Wright, Guest Editor

Introduction. Irving S. Wright

The Discovery of Heparin. Jay McLean

Preparation of Heparin and Its Use in the First Clinical Cases. Charles H. Best

Heparin: A Mucopolysaccharide and an Active Antithrombotic Drug. J. Erik Jorpes

The Development and Use of the Prothrombin Tests. Armand J. Quick

The Discovery of Dicumarol and its Sequels. Karl Paul Link

The Introduction of Heparin Therapy in Cases of Early Thrombosis. Gunnar Bauer

Experience with Anticoagulants. Irving S. Wright

Historical Data Regarding the Experiences with Coumarin Anticoagulants at the University of Wisconsin Medical School. Ovid O. Meyer
CONTENTS OF VOLUME XIX

My Early Experience with Bishydroxycoumarin (Dicumarol). Edgar V. Allen .......................................................... 118

Historical Notes on the Early Development of Anticoagulant Therapy with Dicumarol in Sweden, Jorgen Lehmann ....... 122

Post-Thrombotic Sequelae Preventable by Anticoagulant Therapy. Harry Zilliacus ............................................. 127

Personal Experiences with Anticoagulants for Coronary Atherosclerosis. E. Sterling Nichol .................................... 129

Abstracts .................................................................... 135

American Heart Association .......................................... 158

Contributors to This Issue ................................................ 161

No. 2

Editorial

Rheumatic Fever in the Adult: Criteria and Implications. Charles K. Friedberg ......................................................... 161

Clinical Study of Twenty-Three Cases of Ebstein's Anomaly of the Tricuspid Valve. Gerold L. Schiebier, Paul Adams, Jr., Ray C. Anderson, Kurt Amplatz and Richard G. Lester ............................................. 165

Atrial Flutter as a Manifestation of Digitalis Toxicity. Jay D. Coffman and Gerald H. Whipple ........................................ 188

Atrial Septal Defect: Factors Affecting the Surgical Mortality Rate. Dwight C. McGoon, H. J. C. Swan, Robert O. Brandenburg, Daniel C. Connolly and John W. Kirklin ............................................. 195

Serum Cholesterol in Man: Diet Fat and Intrinsic Responsiveness. Ancel Keys, Joseph T. Anderson and Francisco Grande .................................................... 201

Severe Acidosis and Hyperpotassemia Treated with Sodium Bicarbonate Infusion. Kuno C. Schwartz, Burton D. Cohen, Glenn D. Lubash and Albert L. Rubin ...................................................... 215


Special Article

Biochemical Alterations in Blood in Obliterative Atherosclerosis. Kornel Gibinski ......................................................... 228


Familial Pseudoxanthoma Elasticum and Valvular Heart Disease. Jay D. Coffman and Sheldon C. Sommers .................. 242

The Electrocardiogram of the South African Bantu. J. D. Woods and W. Laurie ......................................................... 251

Determinants of the Left Atrial Pressure Pulse in Mitral Valve Disease. Neil A. J. Hamer, Sujoy B. Roy and James W. Dow .... 257

Serum Parameters as Discriminators between Normal and Coronary Groups. Bernard S. Schlessinger, Fredrick H. Wilson, Jr., Lawrence J. Milch and the Cardiovascular Research Group ............ 265

Cardiac Chamber Volumes and their Significance in Rheumatic Heart Disease with Isolated Mitral Stenosis. Louis A. Soloff and Jacob Zatuchni ...................................................... 269

Clinical Progress

Beriberi Heart Disease. Reverdy H. Jones, Jr. .................. 275
CONTENTS OF VOLUME XIX

No. 3

EDITORIAL.
IN THE BEST INTEREST OF THE PATIENT. Jere W. Lord, Jr. .......... 321

DISSEMINATED NODULAR PULMONARY OSSIFICATION IN PATIENTS WITH MITRAL STENOSIS. William R. Wilson, Rikuro Sasaki and Charles A. Johnson .................................................. 323

ATYPICAL PATENT DUCTUS ARTERIOSUS: THE USE OF A VASOPRESSOR AGENT AS A DIAGNOSTIC AID. Lamar E. Crevasse and R. Bruce Logue ......... 332


SO-CALLED PRIMARY VENOUS OBSTRUCTION IN THE UPPER EXTREMITY: PAGET-SCHROETTER SYNDROME. John T. Phelan and Charles W. Crumpton 350

EFFECTS OF CHLOROTHIAZIDE ON SPECIFIC RENAL FUNCTIONS IN HYPERTENSION. A. C. Corcoran, Cathel Macleod, Harriet P. Dustan and Irvine H. Page ................................................. 355

A MECHANISM OF CHLOROTHIAZIDE-ENHANCED EFFECTIVENESS OF ANTIHYPERTENSIVE GANGLIOPLEGIC DRUGS. Harriet P. Dustan, G. R. Cumming, A. C. Corcoran and Irvine H. Page ................................................. 360


THE FORCES NEEDED TO EVOKE SOUNDS FROM CARDIAC TISSUES, AND THE ATTENUATION OF HEART SOUNDS. William Dock ......................... 376

THE ROLE OF VESSEL TONE IN MAINTAINING PULMONARY VASCULAR RESISTANCE IN PATIENTS WITH MITRAL STENOSIS. Herbert J. Semler, John T. Shepherd and Earl H. Wood ......................... 386

BLOOD PRESSURE STUDIES IN RURAL AND URBAN GROUPS IN DELHI. S. Padmavati and Savitri Gupta .......................................................... 395

HIGH-VOLTAGE QRS COMPLEXES IN THE ABSENCE OF LEFT VENTRICULAR HYPERTROPHY. Gordon R. Cumming and William L. Proudfit .................. 406

FALSE "CORONARY PATTERNS" IN THE INFANT ELECTROCARDIOGRAM. P. Dominguez, B. L. Lendrum and A. Pick .................................... 409

BIOCHEMICAL STUDIES IN FULL-BLOODED NAVAJO INDIANS. Reuben Straus, Jarvey Gilbert and Moses Wurm .............................................. 420

ELECTROCARDIOGRAPHIC RESPONSE TO EXERCISE IN PATIENTS WITH MITRAL STENOSIS. Lloyd H. Ramsey and John Beeble ......................... 424

TIME AND CONCENTRATION COMPONENTS OF INDICATOR-DILUTION CURVES RECORDED FOLLOWING CENTRAL INJECTIONS OF DYE IN NORMAL HUMAN SUBJECTS. Stefan A. Carter, H. J. C. Swan and Earl H. Wood ................. 430
CONTENTS OF VOLUME XIX

Anatomic Variations of the Auditory Canal Pertaining to the Fit of Stethoscope Earpieces. Dale Groom and Waddy Chapman .......... 606

Clinical Progress
The Clinical Use of the Percutaneous Renal Biopsy. John D. Arnold and Benjamin Spargo ................................. 609

Abstracts ............................................................. 622

Books Received ....................................................... 627

American Heart Association ........................................ 629

Contributors to this Issue ........................................ 638

No. 5

Editorial
The Role of Vessel Tone in Pulmonary Hypertension. John T. Shephard and Earl H. Wood .............................................. 641

The Lewis A. Conner Memorial Lecture: Maintenance of Cardiorespiratory Functions by Extracorporeal Circulation. John H. Gibbon, Jr. 646

Plasma Catechol Amine Concentrations in Myocardial Infarction and Angina Pectoris. P. C. Gazes, J. A. Richardson and E. F. Woods . 657


Acute Reversible Heart Failure in Severe Iron-Deficiency Anemia Associated with Hookworm Infestation in Uganda Africans. K. Somers .......................................................... 672

Studies of Blood Coagulation and Fibrinolysis in Patients with Idiopathic Hyperlipemia and Primary Hypercholesteremia Before and After a Fatty Meal. Saul I. Nitzberg, M. Anthony Peyman, Robert Goldstein and Samuel Proger .............................................................. 676

Effects of Intravenous Hydration and Pitressin on Renal Function in Subjects with Essential Hypertension. William Hollander .... 691

Action of Nitroglycerin on the Coronary Circulation in Normal and in Mild Cardiac Subjects. Norman Brachfeld, John Boser and Richard Gorlin .......................................................... 697

Effect of Nitroglycerin on the Coronary Circulation in Patients with Coronary Artery Disease or Increased Left Ventricular Work. Richard Gorlin, Norman Brachfeld, Colin MacLeod and Pierre Bopp ............................................ 705

Electrocardiographic Patterns in Man at High Altitudes. Andrés Rotta and Andrés López .................................................. 719

Water and Salt Excretion after Intravenous Salt Load in Hypertensive Subjects. T. D. Ullmann, S. H. Blondheim, S. Dikstein and D. Benshay ......................................................... 729


Pericardial Tamponade Following Percutaneous Left Ventricular Puncture. Richard J. Botham, G. G. Rowe and W. P. Young ............ 741

Rupture of Aneurysm of Aortic Sinus of Valsalva Associated with Acute Bacterial Endocarditis. Hershel Jick, P. Jack Kasarjian and Morley Barsky .................................................. 745

A Case of Abnormal Cardiac Position (Levoposition). G. G. Rowe and L. W. Paul ......................................................... 750

Clinical Progress
Bacterial Endocarditis in the Antibiotic Era: With Special Reference to the Later Complications. William L. Morgan and Edward F. Bland ......................................................... 753
# CONTENTS OF VOLUME XIX

## CLINICAL CONFERENCE

**The Malignant Carcinoid Syndrome.** Roland E. Schneckloth, Irvine H. Page and A. C. Corcoran .................................................. 766

**Abstracts** .................................................. 773

**Book Reviews** .................................................. 795

**American Heart Association** .................................................. 796

**Contributors to This Issue** .................................................. 799

### No. 6

**Editorial**

Role of Connective Tissue Ground Substance in Degenerative Disease. Albert Dorfman .................................................. 801

A Clinical Study of 1,000 Consecutive Cases of Mitral Stenosis Two to Nine Years After Mitral Valvuloplasty. Laurence B. Ellis, Dwight E. Harken and Harrison Black .................................................. 803

Evaluation of Operability in Patients with Pulmonary Hypertension by Catheterization and Occlusion of Patent Ductus Arteriosus. A. Actis-Dato and A. Tarquini .................................................. 821

Relationship between Diuretic and Antihypertensive Effects of Chlorothiazide and Mercurial Diuretics. William Hollander, Aram V. Chobanian and Robert W. Wilkins .................................................. 827

Mitral Incompetence Caused by Disease of the Mural Cusp. P. G. F. Nixon, Geoffrey H. Wooler and Leo R. Rodigan .................................................. 839

Influence of Some Vasodepressor Drugs on Fibrinolytic Activity. Murray Weiner, Kurt de Crinis, Walter Redisch and J. Murray Steele .................................................. 845

Dietary Fat, Serum Cholesterol Levels and Incidence of Atherosclerosis in Delhi. S. Padmavati, S. Gupta and G. V. A. Pantulu .................................................. 849

Differential Lung Function in Atrial Septal Defect. H. A. Fleming .................................................. 856

Changes in Proteins and Lipoproteins in Diabetes and Their Relationship to Vascular Degeneration. J. C. Demanet, P. E. Gregoire and P. A. Bastenie .................................................. 863

Left Ventricular Activation Time in Normal Men. Takashi Wada .................................................. 868

Left Ventricular Activation Time in Left Ventricular Hypertrophy and in Left Bundle-Branch Block. Takashi Wada .................................................. 873

Studies of Fat Lipolysis by Post-Heparin Human Plasma Lipoprotein Lipase and by Human Pancreatic Lipase. H. Engelberg .................................................. 884

Extrapulmonic Stenosis of the Pulmonary Veins. Jay Bernstein, Anthony C. Nolke and Joseph O. Reed .................................................. 891


Right Atrial Myxoma. Martín S. Belle .................................................. 910

Use of a Calcium Chelating Agent (NaEDTA) in Cardiac Arrhythmias. Burton D. Cohen, Norton Spritz, Glenn D. Lubash and Albert L. Rubin .................................................. 918

A Large Whale Heart. George J. Race, W. L. Jack Edwards, E. R. Halden, Hugh E. Wilson and Francis J. Luibel .................................................. 928

**Clinical Progress**

Clinical Evaluation of Chlorothiazide. Walter M. Kirkendall .................................................. 933

**Abstracts** .................................................. 942

**American Heart Association** .................................................. 955

**Contributors to This Issue** .................................................. 959